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FOR THOSE THAT CHOOSE TO THINK FOR THEMSELVES

From The Desk Of: MARINA ZACHARIAS

TAKING THE BULL OUT OF "MAD COW DISEASE"

Recently I have had several people express concern regarding glandulars from bovine sources and the possibility of contamination from "mad cow disease". While I applaud their caution, I do want to put your mind at rest about this over-sensationalized subject. This scare story may sell papers but it sure doesn't hold up to even the smallest amount of investigation.

As you all know by now, bovine spongiform encephalopathy (BSE) was discovered in the United Kingdom in 1986. Symptoms in the cow include loss of coordination, apprehension, and changes in temperament--thus the nickname "mad cow disease". In the U.K. it has been blamed for the deaths of over 165,000 cattle (up to the end of January 1997). This statistic does include instances where whole herds were put down when one or two cows were diagnosed as being infected.

There is scientific evidence pointing to an association between the outbreak of BSE and the practice of feeding cattle manufactured protein derived from carcasses of diseased sheep suffering with "scrapie"--another spongiform encephalopathy of the central nervous system. (Yes Sam, the good old rendering plants were at it again).

Feeding cattle **any** bonemeal or meat is just plain silly. Cattle are herbivorous ruminants--that is their diet is normally grasses and herbs. Rendering plant meat products may be a cheap source of protein but feeding this junk to cows goes beyond inappropriate to dangerous. This practice had been going on for years prior to the first recorded case of BSE. Speculation arose that there must be a long "incubation" period for the disease (no mention was ever made of the strong possibility that it simply took time for this form of "nutrition" to take its toll on the system).

The U.K. finally passed a law making it illegal to use this type of feeding. BSE in cattle now seems to be under control as numbers of new cases are progressively falling.

Although BSE had major ramifications in the U.K. cattle industry, it is doubtful that we would ever have heard about it if it were not for the speculated "connection?" made to a human disease called "Creutzfeldt-Jacob Disease" (CJD).

CJD affects adults who are about age 60 at the rate (worldwide) of one person per million. So it is considered very rare. Early in 1996, a "new neuropathological variant" of CJD was "recognized" in 10 persons in the U.K. who were under the age of 45.

Because this took place in the U.K. during the same time frame as the problems in cattle and **because they had no other explanation as to the cause** of this new variant, they made a guess that somehow "mad cow disease" may have jumped the species barrier and infected a human! No proof! No science! Just a guess!!

The press of course jumped all over this concept and for a while at least, blasted out rhetoric crazier then any of the cows called "mad".

Actually the cause of 8 out of the 10 cases reported in March 1996, is unknown. The other 2 were due directly to a **certain medical treatment**. Although not widely publicized, it is a fact that medical treatments with "human growth hormone" (hGH) caused Creutzfeldt-Jacob disease in a number of people, some of whom died from it! In the U.K., 16 people have died of CJD and three more are terminally ill **after being treated with hGH**. No connection with mad cows!

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"The fact remains that there is as yet no scientific proof to link human encephalopathies with their animal occurrence. Any 'link' is probably nonexistent"

--source: Cambell Douglas, M.D.

No cases of BSE have been reported among cattle in the U.S. The Department of Agriculture (USDA) has prohibited importation of cattle, beef, and bovine products for animals from countries with confirmed cases of BSE in cattle.

In January of 1997, FDA finally twigged to what the U.K. lawmakers had done, and has now proposed a measure that would prohibit using tissues from ruminants (such as cows, sheep, goats) in the manufacture of ruminant feeds. It's not law yet, but at least it's a step in the right direction. (Now if they would only do something similar for pet foods....ah, I know, dreaming again).

A notable fact was disclosed from an in depth study by the British-based Soil Association. **No** animals born on a farm after the herd was registered organic, have contracted BSE. In addition to not feeding bonemeal or meat products to herbivorous animals and avoiding the routine use of drugs, organically-oriented livestock owners shun the usual intensification of cattle operations as well as intense use of organophosphate pesticides which lower the vitality of animal immune and nervous systems.

Briefly, BSE does not exist in the U.S., and BSE does not present any known health hazard to humans.

Glandular products have been produced and used in the U.S. for over 60 years with absolutely no reports of microbial contamination or resultant illness. Since 1986 both the FDA and the USDA requirements are such that manufacturers may obtain bovine ingredients **only** from animals raised in countries free of BSE.

There is no question in my mind regarding the **safety** of glandular products made in the U.S. The effectiveness of any particular brand is a whole other story that I won't get into at this time except to say the usual "let the buyer beware".

LAND OF THE FREE ???

In the last issue, we reported on what is happening in Canada with natural products, where possession of DHEA is now a felony carrying the same penalty as possession of crack cocaine. For those of you that think it could never happen here, consider a few items currently going on in the good old USA:

Item: FDA website (http://www.fda.gov)..." ...plans to amend its regulations and procedures for consideration of standards adopted by Codex. This action is being taken to provide for the systematic review of Codex standards in order to enhance consumer protection, promote international harmonization and fulfill obligations of the United States under international agreements." (2)

- Item: December 4, 1996--PR Newswire..."Pharma Print Inc." of Irving California, announced the **worlds first patent** on a complex herbal molecule. The publicly traded company has the direct backing of the World Health Organization and has developed a process which can identify the active compounds in herbs, **making it possible to standardize herbal medicines.**

  Pharma Print has announced plans to create **pharmaceutical versions** of three of the most commonly traded herbs: Saw Palmetto, which will be **patented** to treat enlarged prostates; Ginger, to be **patented** for motion sickness; and St. John's Wort, to be **patented** for mild to moderate forms of depression.

  Pharma Print has already licensed other pharmaceutical companies to use their patented technology.

- Item: The Utah Natural Products Alliance has jointly signed a memo with the National Nutritional Foods Association (NNFA) and the American Herbal Products Association (AHPA), calling for a "special over-the-counter **drug category**" to be created for herbs and botanicals.

Hmmm. So let see now. The FDA boldly admits it intends to go along with Codex; herbs can now be patented, standardized, and synthetically produced by the pharmaceutical industry; the "watchdogs" of the nutritional industry associations are calling for botanicals to be placed in a drug category,....nope, nothing suspicious there. We're O. K Charley, 'cause we live in "the land of the free".

THE IMMUNE SYSTEM--PART 1

The immune system is perhaps one of the most complex and fascinating systems of the body. Although we all understand that it is the immune system's job to defend the body against foreign invaders, understanding the methods used to accomplish this is relatively new knowledge. As we move along in this series, I will attempt to provide you with definitions of the "language" used to describe the system. For you science buffs out there, I apologize for oversimplifying a complex subject in an effort to pass along some basic concepts. Bear with me while we start from the beginning and move along to modern theory and some conjecture.

By the time we are through, you will have an understanding of what vaccinations attempt to do, the role of nutritional supplements, and some speculation of how nosodes may work.

When we talk of this herb or that substance having anti-microbial properties, are we saying that it directly hunts out and kills the microbe? When we speak of "immunization" (be it vaccination or nosode) are we talking about something we put inside the body that directly attacks the offender ?

NO!

In all cases we are speaking of helping the **body's immune system** to function at an optimum level. True health cannot be achieved unless the immune system is operating as nature intended. The magnificent design of this system is breathtaking in its concept. Consider if you will, the remarkable ability to distinguish between the body's own cells as "self" and foreign cells as "non-self". When immune defenders encounter cells or organisms carrying markers that say "foreign," they quickly swing into action to get rid of them in one way or another. Anything that can trigger this immune response is called an ANTIGEN. In other words, if you don't carry the right "passport" you're in deep doo-doo with the system.

The secret to the success of the system, is an elaborate and dynamic communications network. Millions and millions of cells, organized into sets and subsets, pass information back and forth like clouds of bees swarming around a hive. It can recognize millions of different enemies, and it can produce secretions and cells to match up with and wipe out each of them!!

Some immune cells are "general purpose" warriors and will take on all comers. Others are highly specific and will only deal with selected targets. To work effectively, most immune cells need cooperation of their fellows. Sometimes immune cells communicate by direct physical contact, sometimes by releasing chemical messengers. There is also new evidence of "electronic" communication.

When the immune system is crippled or damaged in some way, it is an invitation not only for microbial infection but also a prime setting for cancer to take hold.

In abnormal situations, the immune system can mistake "self" for "non-self" and launch an attack. The result is called "autoimmune" disease. Some forms of arthritis and diabetes are examples of this.

In other cases the immune system responds inappropriately to a seemingly harmless substance such as pollen, certain foods, etc. The result is allergy. This kind of antigen is called an ALLERGEN.

So lets get into the bits and pieces that make up the "system" and try to fit them together. As the immune system is composed of the lymphatic vessels and organs (thymus, spleen, tonsils and adenoids, and lymph nodes), white blood cells (lymphocytes, neutrophils, basophils, eosinohils, monocytes, etc.) specialized cells residing in various tissues (macrophages, mast cells, etc.) and specialized serum factors, we do have a lot of ground to cover just to get a handle on the basics.

For now lets start with a word that everybody recognizes but may not realize their limited function--- ANTIBODIES. We were all taught that antibodies wipe out specific antigens. While this is true to some extent, it needs to be emphasized that antibodies only ambush antigens in the body's fluids. **They are powerless to penetrate cells.** (3)

The job of attacking target cells (either cells that have been infected by microbes or cells that have been distorted by cancer) is left primarily to **T lymphocytes** and other immune cells, which we will get into later.

The difference is so basic that medicine describes the immune system as having two separate branches.

1. "Humoral" immune system: Antibodies are produced to recognize and neutralize antigens. Sometimes referred to as the "specific" or "secondary" system. It is not dependant on the Thymus but rather on the "B cells" (white blood cells that originate in the bone marrow).

2. "Cell Mediated" immune system. This refers to immune mechanisms not controlled or mediated by antibodies. This involves white blood cells called T-cells (Thymus dependent) and other specialized immune cells. Sometimes referred to as the "primary" or "non specific" immune system. It is this system that provides the deeper immunity and **is critical in protecting against the development of cancer and allergies.**

In this issue we will primarily cover some of the basics of the humoral system.

These two branches of the immune system have a reciprocal relationship. That means when the humoral branch is over stimulated (ex. vaccines, allergies), the cell-mediated branch tends to be relatively inactive. Vaccines **do not** stimulate the cell-mediated branch.

Normal microbial infection (what you or I would call "street infection") does stimulate the cell-mediated branch and can stimulate the humoral branch as well. In nature, the humoral system is only activated when the cell-mediated system has failed to look after the problem and needs help.

One of the fascinating aspects of the immune system is that **it has a memory and the capacity to learn**. Long ago physicians realized that people who had recovered from the plague would never get it again--they had acquired immunity. In order to have room for all the cells needed to match millions of possible enemies, the immune system stores just a few of each kind. When an antigen appears, those few matching cells multiply into a full-scale army. After their job is done, they fade away except that the system forever retains a "blue-print" for rapid reactivation should it ever be needed.

Within the humoral system, the prime responsibility for the immune response lies with the B cells. Each B cell is specific to the production of one type of antibody. When a B cell encounters an antigen, it gives rise to many large cells know as "plasma" cells. Every plasma cell is essentially a factory for producing antibodies. Each of the plasma cells from a given B cell manufactures millions of identical antibody molecules and pours them into the blood stream.

An antibody matches an antigen much as a key matches a lock. Some match exactly; others fit more like a skeleton key. But whenever antibody and antigen interlock, the antibody marks the antigen for destruction.

Vaccines contain microorganisms--or parts of microorganisms-- that have been treated so they will be able to provoke an antibody response but not full-blown disease. (They also contain a lot of other stuff that would be considered an "antigen" by the body--but that's a whole other subject).

The amount or concentration of a particular antibody that is in solution can be measured in a laboratory. This is called a "Titer Test". Common sense would indicate that if a Titer Test revealed that antibodies for a particular disease already exist at appropriate levels--**booster shots are not required!**

Here is something more to think about. Even if antibody levels do not test out as appropriate, a booster will not be necessary if the "factory" (the B cell) is healthy and fully prepared to produce them on demand! The pattern **is stored** in memory and providing the proper raw materials are on hand, the humoral system is capable of reacting very rapidly to a previously recognized antigen.

Actually, antibodies belong to a family of large molecules known as IMMUNOGLOBULINS. Some of you will be familiar with these from seeing lab reports with the symbols IgG, IgM, IgA, IgD, IgE. These five different types play different roles in the immune defense strategy.

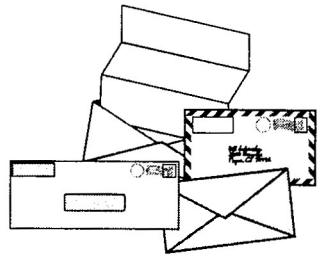
For example, immunoglobulin G (IgG) works efficiently to coat microbes, speeding their uptake by other cells in the immune system. Immunoglobulin M is very effective in killing bacteria. Immunoglobulin A concentrates in body fluids--tears, saliva, the secrections of the respiratory tract and digestive tract--guarding the entrances to the body. It's believed that immunoglobulin E (whose natural job is probably to protect against parasitic infection) is one of the villains responsible for the symptoms of allergy.

One other factor plays a major role in the humoral system and that is the COMPLEMENT SYSTEM. As mentioned in previous issues, complement proteins circulate in the blood in an inactive form. The complement system is made up of about 25 body chemicals (manufactured in the liver and the spleen) that work together to "complement" the action of antibodies in destroying microbes. Complement also helps to rid the body of antibody-coated antigens (complexes).

When the first protein in the complement series is activated--typically by an antibody that has locked into an antigen protruding from a cell--it sets in motion a domino effect. Each component takes its turn in a precise chain of steps known as the "complement cascade". The end product is a cylinder inserted into, and punching a hole in, the cells' wall. With fluids and molecules flowing in and out, the cells swell and burst. Complement proteins, which cause blood vessels to become dilated and then leaky, contribute to the redness, warmth, swelling, pain, and loss of function that characterize an INFLAMMATORY RESPONSE.

In the next issue we will deal with some basics of the "Cell Mediated" immune system.

MAILBOX



I have been blessed to know some truly wonderful people in the dog world. The dedication, patience, persistence and loving care that I have witnessed are nothing short of amazing. Although nothing is ever going to provide a 100% cure for everything that can go wrong, I have found that for those that are willing to go the "extra mile" and do whatever is necessary, the rewards can be well worth the effort. The key factor in each case seems to be an overriding willingness to "stay with the program" and modify when needed.

To truly appreciate the following letters, imagine that your vet has just advised you to take your pet home to die. How would you feel? What would you do?

Dateline June 24, 1997 Steve M. Dudley Flagstaff Arizona

Dear Marina,

In August of 1996 I took my six year old Bernese Mountain Dog to the vet for a nagging cough we could not get him over. Diagnostics and radiographs revealed numerous growths and shadowing in the thoracic cavity.

My vet felt reasonably sure it was cancer. The report and radiographs were reviewed by a canine cardiologist at Colorado State University, who confirmed the diagnosis---- extensive cardiopulmonary and lymphatic involvement with cancer. **At best my boy Baron was given two weeks to live**.

Chemo treatment was ruled out due to the extensiveness of the involvement. My vet said a definitive diagnosis typically involved exploratory surgery, which he would do if I so wished. However he cautioned me that while many patients heal from such surgery, they generally do not recover from it. Also if the involvement was as extensive as the x-rays showed, they would probably not revive the dog.

All that was offered was medications to keep Baron comfortable while he was sent home to die.

It took several days to recover from the devastation we felt from such a diagnosis. In desperation, I decided to consult a holistic vet. The ensuing contact and help I received from my holistic vet eventually led me to Marina.

Until this point in time I had apathetically fed my dogs the "wonderful" commercial kibble we've all been programmed to use.

Between the holistic vet and Marina, and support from friends, we worked to establish a new diet for Baron with supplements designed to strengthen what immune system he had left and to restore as much of the liver function as possible.

Marina was a source of continual help. As we analyzed blood panels and began establishing a program that stabilized Baron, it quickly became apparent that he was actually thriving.

For **eight months** Baron enjoyed life to its fullest. He accompanied me daily cross-country skiing, hiking, and enjoyed pulling his loaded wagon to draft events we put on for our local club. He enjoyed life to its fullest as any healthy dog would. Friends and the local vet community were stunned to see him six months into the treatment. He was a picture of vitality, happiness and energy.

But alas, 9 months after diagnosis Baron stopped eating and began wasting. We continued supplementing him as he was hand fed. Marina worked with us to help stabilize kidney functions which began deteriorating.

On June 11, 1997 we lost our beloved Baron to the cancer. He passed quickly and at home. He was a happy dog right up until the end.

I attribute his lack of suffering to the supplements Marina prescribed during the end. Though we eventually lost against the cancer, we were given a very good quality of life for eight months. Valuable time to live each day to its fullest with Baron, and to prepare for the potential outcome. A darn sight better than the two weeks I was originally given.

My deepest thanks go out to you Marina, and to my holistic vet, for helping us achieve what was said to be impossible. Because of you, Baron enjoyed a marvelous eight months. It was not a period of lingering, instead a joyous time we both celebrated life to its fullest.

One month before he passed away Baron appeared in the veterans ring at our national specialty and enjoyed himself every minute of it.

I've learned a lot from you in the past ten months, lessons that will henceforth be applied to every animal that comes into my home. I'm immensely grateful for all you have helped us with....I am learning to think for myself.

Thank you Marina!

Thank you for the wonderful letter Steve. I do know that the quality of life can be as important as the length. Mere survival, in pain and discomfort is not a goal any of us seek to achieve.

Your dedication to the lengthy regimen suggested is to be admired and emulated.

Dateline June 27, 1997 Sandi Lee Heffner Gilbert Arizona

Dear Marina,

It has been difficult to sit down and write you a note to thank you for everything you have done for our family, but I will start by thanking you for saving and constantly supporting the life of my 8-year-old Maltese dog, a little 5 pound bitch named Patty-Cake. Two years ago, her abdomen filled with fluid, and the finest internal specialist in the Phoenix, AZ area gave the opinion that we should prepare ourselves for her loss. This was after her abdomen was drained 3 times in a 2 week period, and her blood protein level was so low that our veterinarian and the internal specialist did not see how she could possibly survive!

The bloodwork seemed to indicate that Patty's internal organs were trying to shut down! Her liver, pancreas, spleen and even her immune system suddenly were just not functioning! She had "protein losing enteropathy", which is a catch-all phrase that veterinarians use for the leakage of protein through the intestinal wall and into the abdomen cavity---when they cannot actually diagnose what is causing the condition. Poor Patty-Cake blew up to 6 3/4 pounds, all because of this horrible fluid (she looked like a fuzzy soccer ball)! I do want to mention that this girl had been totally healthy until this developed. Yet, suddenly she had both ears become infected, a severe bladder infection, and a horrible sore growing on her upper gum. Her immune system just could not cope at that point!!!

I do want to mention that Patty-Cake is not just a pet, she was a top show-dog when she was young, and now has several children and grandchildren who are champions! She is my constant companion, a true velcro-dog, attached to my body about 23 hours a day. We will be going to the American Maltese National Specialty in San Francisco next month, and Patty-Cake is still so gorgeous that I could easily enter her in the Veteran class---and win!! Actually, she will have 2 of her great-grandchildren in the ring in the Sweepstake as well as the regular conformation classes. We are so very proud of this little wonder, also, because after she completed her Conformation career, she then proceeded to enter the Obedience world with me as her partner---and she was so adorable, with her flowing coat, going over those jumps, heeling, etc.-------I just could NOT lose her at such a young age!!!

That was when a friend recommended that I call you, Marina.

You worked with Patty-Cake's blood tests and sent us homeopathic remedies that supported Patty through this more than difficult time. You constantly shared your knowledge, talent, and patience with us, as we went through stages of panic----and later happiness! Patty has survived and is a little miracle dog now, back to 5 pounds 6 ounces, full of energy, playing with her daughter, running all over our house and yard. I will not even mention all the different remedies and supplements that she has gotten from you, as there have been so many. Also, and probably of major importance, Patty is now on a "live" diet, which is a recipe that you suggested, in order to protect her intestine from the stress of digesting

anything that would be a challenge. This diet has vastly benefited both Patty and her daughter, who has colitis. I have embellished and expanded upon the original diet that you suggested, and I will send you a copy at a later date. (You are welcome to put it into the newsletter, for use by others with digestive problems, if you wish!) I think this diet could benefit many other dogs with digestive or intestinal problems!

I guess that the point is: With traditional veterinary care (only), even the very best, Patty would NOT have been with us today. With your care and approach to healing, Patty still brings us so much joy and happiness. For that, we thank you from the bottoms of our hearts. God bless you, for you are an exceptional healer.

I only wish others could take lessons from this dedicated lady. Her meticulous scheduling of complex protocols, her continual follow through on updating information and her tenacious application of supplementation on a timely basis are a perfect example of what teamwork can accomplish.

There is a very broad base of knowledge available. There are a tremendous variety of natural products available. Extensive protocols exist for treatment of most health conditions. All of this is totally useless unless the person on the firing line does the required job. Thus it ultimately comes down to the willingness of the animal owner, to do "whatever it takes" to accomplish the "miracles" of holistic health care.

These are very special people and I feel honored and privileged to work with them.

****

Just in case you may think that all problems are long, drawn out affairs, I'll share this E-mail with you:

Subject: Holy Cow! Holy Cow! Holy Cow! (July 29/97)

Marina, I am so excited I can't stand it! I gave (dog) a full dose of her remedy that you sent at 3 p.m. and then took her for a walk (which is not fun with her, more like a chore) at about 5pm. Knew something was very different when I reached for my walking gear & she wasn't bouncing off the ceiling. She stood CALMLY while I put her choke & leash on, going down the driveway I heard NO WHINING, passed a loose dog and she didn't trip me or go berserk. She walked calmly, keeping a loose lead, although she still walked ahead of me (haven't got her into heel position on our walks yet). She made it past two houses that she knows have dogs, without dropping her tail or causing a scene.

She LISTENED when I gave her commands like "wait", "easy", and responded to pressure on her collar without me having to use both hands to pull. I can't believe it! All this after only one dose! Can't wait to try the other stuff! I will NEVER be able to thank you enough. If nothing gets any better than this I will die happy! Thank you!

WHAT DO YOU CALL A SUGAR BEET CROSSED WITH A FISH?

In the wild and wacky world of genetic engineering you call it "new and improved"!!

As if we don't have enough trouble with our food supply from "orthodox" sources, the attempt by mankind to interfere with the fundamental blueprint designed by nature, is both dangerous and frightening. The lack of long term testing, (and in some cases short term testing) the fact that these foods do not need to be labeled, and the fact that they could be donwright dangerous, is not getting the attention it deserves.

[illegible] case of the sugar beet, the purpose of the fish gene that they isolated was to acquire a gene for a protein. A gene, basically, is a blueprint. This fish gene was a blueprint for protein that was present in the blood of the Artic Flounder. This particular protein functions like an antifreeze in the blood of the Artic Flounder. In very cold temperatures the fish will not freeze. The rationale was to put a blueprint into the sugar beets so they would produce an antifreeze protein and be grown in colder climate or in a place that has a shorter growing season.

The problem is that when they put a single new gene into an organism, it isn't a perfectly controlled process. Quite often, unexpected effects occur. These effects can cause food that is produced to be allergenic or toxic or reduce it's nutritional value. It isn't like surgery, per se, it is a very sloppy, random process.

Would the FDA really allow anything dangerous to enter the market place? Lets take a look at what's already happened and you can draw your own conclusions (i.e "think for yourself").

Here are some facts about the L-Tryptophan fiasco that you may not be aware of. Tryptophan was produced by Showa Denko (a Japanese chemical company) for many years as a nutritional supplement for the health food industry. They basically used a fermentation process to produce a natural bacteria for their product.

Then they decided that by genetically engineering the bacteria they could produce tryptophan more effectively. The FDA allowed them to put the genetically engineered product on the market without further testing. They argued that the tryptophan was still tryptophan, just produced by another method. They felt it was "the same thing".

They put it on the market and within a few months 1,500 people had been permanently disabled by it. Seven were killed. The genetic manipulation that caused the bacteria to produce more tryptophan also caused them to produce a powerful toxin which was present in the final tryptophan product. The toxin alters the functioning of the immune system causing a wide variety of problems.

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It was the Centre for Disease Control that sorted the whole thing out--not the FDA. The product L-tryptophan is perfectly safe if made in a natural way but the CDC did some very careful epidemiological studies that nailed down very clearly that it was the genetically engineered product that was causing the problem.

So here we had a product of bio-technology that was embarrassing to the FDA and potentially embarrassing to the bio-technology industry. They found the best way out of it was to make the health food industry the scapegoat for the whole thing and promptly banned all tryptophan products from the market as dangerous. Simply not true!! This wasn't a food supplement problem, but a genetic engineering problem, a bio-tech problem, and a regulatory problem.

If this were the only case of unexpected results, I would be less concerned. However more and more reports are coming out that this giant experiment with our food chain has a huge potential for harm in our future.

Take the case of the big multinational feed company, Pioneer Hybrid. They had the idea of genetically engineering soybeans to contain balanced amino acids--all the amino acids that you need for complete nutrition. What they did is take a gene from Brazil nuts and put that gene into soybeans.That did balance out the amino acid composition, which on the surface seems like a great thing. FDA ruled that it was acceptable to put these things on the market with a few little restrictions.

But unexpectedly those same genetic manipulations caused the soybeans to produce a powerful allergen that caused strong allergic reactions in many people. Fortunately, when Pioneer Hybrid discovered that these soybeans were allergenic they decided not to commercialize them. If this product had gotten to the market it likely would have killed some people from antiphalactic shock reactions to the potent allergen. They lost millions of dollars on the project.

Speaking of losing money, how many of you remember the highly touted "Flavr-Saver" tomato? This was one of the first genetically engineered vegetables that got out there. They engineered it so that it was supposed to stay looking fresh on the shelf longer. Turns out that the same genetic manipulations caused the skin to be weaker, so that when they were ready to harvest, they couldn't use the standard mechanical harvesting equipment. It made tomato puree of the tomatoes. Another financial flop. That's why you don't find it on your grocery shelves now.

Another example is genetically engineered cotton seed that was sold last summer to farmers across the South and Southwest. This cotton was engineered to be resistant to the boll-worm. They got it out in the field and the boll-worms loved it and ate it like candy. There are now class action suits against Monsanto for deceptive advertising of this product.

Certainly not the results expected by the companies involved!

Right now the big thing in the bio-tech industry is genetic engineering to produce grains and vegetables that carry their own built in insecticides.

For example potatoes have been engineered with a gene that carries a toxin in it that kills potato bugs. The plant carries the toxin pervasively throughout the whole plant. Supposidly this is a very specific toxin that dosen't hurt mammals. At least that is what the short term LD 50 studies indicate. There is however, strong data from the University of North Carolina that is showing high concentrations of the toxin produces resistant pests in a few generations. So then what? Develop another toxic gene?

No long term studies have been done on these genetically mutated plants and nothing has been done to assess possible allergy or food intolerence responses. With respect to the limited animals studies, here's a line from the July/97 issue of Acres U.S.A.--"If a rat has a splitting headache from eating something, the rat can't tell you". Maybe it doesn't kill him at 50 times concentration but does it have any other effect?

One of the greatest dangers in unleashing this giant experiment without careful consideration, is the risk of damaging the integrity of the gene pool throughout agriculture. **Cross pollination** makes it very difficult to keep the genetically engineered crops in their own field and not contaminate non-genetically engineered crops in adjacent fields. There can be "gene drift" that over time could effect a whole countryside.

The organic community is taking this very seriously and is working now to figure out how to handle this--at least to set up some guidelines for testing seeds to make sure that what they put in the ground is free of genetically engineered genes.

I really have difficulty in having any confidence with the "scientific" assurances that mucking around with the fundamental blueprint of nature is safe. Personally I don't want to eat foods that have been genetically altered and I sure don't want to feed them to my animals. Without any need to lable this stuff, I guess the only thing I can do is to try to stay with "Certified Organic" food as much as possible.

Just as DDT was an unknown quantity 25 years ago (with "scientific" assurances of safety), genetically engineered foods are an unknown quantity today. The evidence isn't there to demonstrate long-term safety of these things. From the little I have seen with mankinds attempt to outsmart nature, I would be more inclined to think that there is more of a tendancy that this will create significant health risks in the future.

I guess time will tell. In the meantime, draw your own conclusions on this latest "nutritional experiment".

QUERCETIN

Quercetin is a flavanoid that serves as the backbone for many other flavanoids. It is consistently the most active of the flavanoids in experimental studies, and many medicinal plants owe much of their activity to their high quercetin content.

It is best known as an anti-inflammatory/anti-allergy agent. Because it stabilizes mast cell membranes and prevents the release of histamine and other inflammatory agents, it is often prescribed for food and inhalent allergies, asthma, excema, psoriasis, gout, and ulcerative colitis.

Due to its antioxidant effect, quercetin can inhibit inflammatory processes mediated by "leukotrienes" (inflammatory agents a thousand times more powerful than histamines), hyaluronidase (collagen-destroying enzymes), and lysosomal enzymes (other promoters of localized inflammation).

Quercetin can significantly decrease the accumulation of "sorbitol" in the lens of diabetic animals, effectively delaying the onset of cataracts. It is also indicated in diabetes for its ability to enhance insulin secretion, protect the pancreatic beta-cells from the damaging effects of free radicals, and inhibit platelet aggregation.

It functions like other bioflavonoids in enhancing the collagen network (structural integrity) of blood vessels, and is known for its antiviral activity.

Many flavonoids inhibit tumor formation, but again quercetin has consistently demonstrated significant antitumor activity against a wide range of cancers. Including squamous cell carcinoma; leukemia; and cancers of the breast, ovaries, colon, rectum, and brain. Unfortunately, there are no human studies to support the impressive results noted in animal and "in vitro" studies.

In nature it occurs in various fruits, vegetables, nuts, seeds, leaves, flowers, and barks. I use a high quality powder concentrate (300 mg. per capsule) made by Allergy Research. For best absorbtion it should be used in conjunction with a protein-digesting enzyme (for example: bromelain) in equal amounts.

Quercetin appears to be extremely safe to use. Carcinogenic and teratogenic studies in rats and rabbits have shown that it is without apparent side effects even when consumed in very large quantities (2,000 mg. per Kg. of body weight) for long periods of time (up to 2 years).

Unlike the citrus bioflavonoids, quercetin has no interaction with any drug. It can be used even during pregnancy.

THIS AND THAT

- "Give away from food"--This instruction is found on all Homeopathic remedies and seems to confuse many people. When dosing, what we are really looking for is a clean mouth rather than an empty stomach. As the remedy is absorbed through the mucas membranes in the mouth, we want to avoid any possible contamination that may tend to weaken the effectivness of the remedy.

- White particles or cloudiness in a liquid homeopathic remedy does not mean it is spoiled. This is simply some of the lactose base material that has percipitated from the solution. Just shake it up and go ahead and use it.

- For dogs with allergies that are constantly licking their feet, you may want to try bathing the feet in "Selsun Blue" shampoo to give relief.

- For animals that are difficult to administer pills or tablets, try mixing the pill in a small ground meat ball. Other "hiding" materials that some breeders use are: cheese, natural peanut butter, honey, or slipping it in to one of the organ meats. Don't forget that capsules can be opened or tablets crushed and simply mixed in with the food.

- Juliette de Bairacli Levy fans will be happy to learn that her book "Nature's Children" is now again available ($11.95). This delightful book is a must for anyone interested in "Natural Child Rearing".

  Many of you are familiar with her "Complete Herbal Handbook for the Dog and Cat" and/or "Cats Naturally".

  You may also want to read her other books:
  ---Farm & Stable (for large animals)
  ---Traveler's Joy (see Volume 1, Issue #5 for a review)
  ---The Illustrated Herbal Handbook For Everyone
  ---Common Herbs for Natural Health (remedies, recipes and Gypsy wisdom).

  Of course I will continue to stock the video (2 tape) set of her 1996 seminar in Seattle.

- The American Holistic Veterinary Medical Association will hold its annual conference in Vermont, September 13 to 16.

It looks like there will be several good sessions on practical applications of a variety of holistic modalities, including approaches for Immune-Mediated disease and "Leaky Gut" syndrome. I will bring you all the latest information from the conference in future issues.

'Till next time, take care out there.